SUNFLOWER SEED DISPENSER AND SHELL DISPOSAL CONTAINER

CROSS-REFERENCE TO RELATED APPLICATION

This application is an original nonprovisional application. It does not claim priority back to any previously filed patent application.

BACKGROUND OF THE INVENTION

1. Field of the Invention.

The present invention relates to the field of containers for food items, and in particular, a container for dispensing sunflower seeds and disposing of sunflower seed shells.

2. Description of the Related Art.

Although there are a number of patented inventions relating to various forms of drink containers, and a few patented inventions relating to containers for food items, no one has ever patented a container that is designed specifically to dispense sunflower seeds and dispose of sunflower seed shells. The present invention is not only volumetrically calibrated to hold both unused sunflower seeds and discarded sunflower seed shells, but its size and shape are designed to allow the user to consume sunflower seeds while driving. In addition, the present invention takes into account the fact that the sunflower seed refuse will need to be ventilated so as to prevent the container from taking on an unpleasant odor. Despite the fact that there are a number of dual-compartment container patents, no prior invention incorporates the unique features of the present invention, which are specifically tailored for the particular application described herein.

U.S. Patent No. 132,020 (Odell, 1872) was one of the first patents to cover a dual-compartment bottle, and it provides a bottle with one or more partitions inside of it. The partition divides the bottles into a plurality of compartments, each of which has its own neck or spout. The inventor states that the bottle can be used for liquid, powdered or other substances.

U.S. Patent No. 4,196,808 (Pardo, 1980) claims a package for sequentially dispensing the components of a two-component product, comprising a first compartment with a neck, a second compartment with a neck, a means for fastening the two compartments together so that the neck finishes are parallel to each other and at the same elevation, and a sequential interlock. The sequential interlock comprises a sleeve-like guard portion and a blade-like tether portion that works to ensure the proper sequential opening of one compartment before the other.

U.S. Patent No. 4,277,000 (Jaarsma, 1981) involves a multi-compartment container with a molded body portion formed of thermoplastic material and a molded cap. The body portion has a dividing wall that forms separate internal compartments. One end of the dividing wall intersects with the top plane of the container defines the opening to the lower compartment. The other end of the dividing wall is attached to the inner edge of one of the side walls. The volumes of the two compartments vary depending on the precise location of the divider wall. The molded cap is shaped like an inverted cup and fits over the entire top surface of the container.

U.S. Patent No. 4,860,927 (Grinde, 1989) discloses a two-compartment container that has a lower relatively large capacity reservoir for storing material that will later be measured in the upper lesser capacity reservoir. The upper reservoir has raised graduated

marks that correspond with certain volumetric measurements. The container includes an internal passageways that allow fluid in the lower reservoir to flow into the upper reservoir when the container is tipped but that prevent additional fluid from flowing into the upper reservoir when the fluid in the upper reservoir is being dispensed.

U.S. Patent No. 4,881,652 (Schiemann, 1989) provides a dual-chambered can that has a larger chamber for holding gasoline, a smaller chamber for holding oil, a thin connecting member, and a handle. The smaller chamber has an upper zone that extends like a cupola partway up the height of the handle. The only independent claim includes specifics relating to the shape of the connecting member and the shape and thickness of the handle.

U.S. Patent No. 6,158,623 (Benavides *et al.*, 2000) relates to a container for handling bulk flowable products. The container comprises a housing with first and second end walls, a partition inside the housing dividing it into first and second compartments, an outlet for each compartment on opposite ends of the housing, and closures for the outlets. The partition is sloped toward each outlet so that the enclosed material will flow toward whichever compartment is on the bottom. The container was designed for restaurants to hold, for example, rice and beans.

U.S. Patent No. 6,179,146 (Betras, 2001) describes a container with a first and second hollow chamber. Each chamber is helical in shape so as to provide a more integral bottle structure and enhanced aesthetic qualities. The chambers are attached to a top, which helps keep them together, and they can also be attached by a bottom or an attachment device. The container was meant to contain liquids or fluids, such as drinks, jellies, salad dressings, shampoo/conditioner, cosmetics, etc.

U.S. Patent No. 6,220,311 (Litto, 2001) discloses a container with a usable material chamber and a displacement matter chamber that are separated by a flexible membrane. As the material in the usable material chamber is used up, matter is introduced into the displacement matter chamber to increase its volume and concurrently decrease the volume of the usable material chamber. The purpose of this apparatus is to remove atmospheric air from contact with the usable material, so that, for example, carbonated beverages will not go flat.

U.S. Patent No. 6,325,229 (Anders, 2001) discloses a container with multiple compartments wound around each other in a spiral fashion. Each compartment is spiral wound along a common axis so as to provide a symmetrical geometric form. In the preferred embodiment, the compartments are used to hold beverages, and each compartment has a separate opening. The compartments can be further held together with releasable, interlocking features such as mating pairs of male and female parts.

U.S. Patent No. 6,450,351 (Thompson, 2002) involves a multi-compartment container with one or more vertical dividing walls inside the container. Each dividing wall increases in thickness from bottom to top so that when the dividing wall reaches the top surface, it is so thick that it defines a semi-circular opening. Each semi-circular opening is covered by a circular, flexible, foil seal. This container was intended to allow a person to drink three different carbonated beverages without the beverages going flat. It was also designed to allow three different people to drink sanitarily from the same container.

U.S. Patent No. 6,499,614 (Thompson, 2002) provides a multi-compartment container wherein each compartment is accessed by a straw and has a concave bowl-

shaped depression at the point where the straw accesses the compartment. The straws have corrugated middle portions that are located adjacent to and are larger in diameter than the apertures through which the straws fit, which holds the straws in place and allows them to pop outward when a cap that covers the bowl-shaped depression is opened.

U.S. Patent No. 6,571,977 (Goncalez *et al.*, 2003) and U.S. Patent Application Pub. No. 2003/0052130 (Gancalez [sic] *et al.*) both cover a container with an outer compartment and an inner compartment that is centrally aligned within the outer compartment. This particular container was designed so that consumption of the material in either compartment would not cause imbalance.

U.S. Patent Application Pub. No. 2002/0074347 (Murray *et al.*) claims a multi-compartment container and dispensing device with a septum that extends from the bottom of the container up through the neck to the container opening. The patent application specifically recites that the invention is intended to dispense flowable compositions in a 1:1 ratio.

In addition to the utility patents and patent application discussed above, there are several design patents covering dual-compartment bottles. See, e.g., U.S. Patent No. D220,864 (Weckman, 1971); U.S. Patent No. D301,688 (Green, 1989); U.S. Patent No. D302,656 (Green, 1989); U.S. Patent No. D333,263 (Markuzov, 1993); U.S. Patent No. D363,020 (Mason, Jr. *et al.*, 1995); U.S. Patent No. D393,202 (Bertolini *et al.*, 1998); U.S. Patent No. D402,553 (Webster *et al.*, 1998); U.S. Patent No. D404,302 (Martin, 1999); U.S. Patent No. D411,748 (Klima, Jr., *et al.*, 1999). None of these designs even approximates the design of the present invention.

Despite the evolving technology discussed above, it is apparent that no one has invented a container that is specifically designed, and in fact volumetrically calibrated, to allow a person to consume sunflower seeds and neatly dispose of their shells while driving. It is an object of the present invention to provide such a container and to satisfy the physical and aesthetic constraints posed by this particular use.

BRIEF SUMMARY OF THE INVENTION

The present invention is a portable, dual-compartment container designed specifically to dispense unshelled sunflower seeds and to hold sunflower seed refuse. The container comprises a dispenser compartment, a disposal compartment, and a dividing wall. The two compartments are separately blow molded, and the dividing wall is made up of one surface of the dispenser compartment and one surface of the disposal compartment. The two compartments are held together by packaging and/or surface mating means, such as snaps. The dispenser compartment contains sunflower seeds, and the disposal compartment contains sunflower seeds refuse, which includes sunflower seed shells and may include saliva if the consumer shells the sunflower seeds in his mouth and spits out the shells. In the preferred embodiment, the volumetric ratio of the dispenser compartment to the disposal compartment is approximately 1:1.7.

The container is dimensioned so as to fit in a standard vehicle cup holder. The disposal compartment has ventilation holes and is optionally made of an opaque material to conceal the enclosed refuse. The dispenser compartment is preferably made of a transparent material so that the consumer can see how many unshelled sunflower seeds are left. Each of the compartments comprises a neck and a cap. The neck of the disposal

compartment is situated on top of the container and is wider than the neck of the dispenser compartment to facilitate spitting refuse into the disposal compartment. In the preferred embodiment, the two compartments are made of thermoplastic.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a perspective view of the preferred embodiment of the present invention.

Figure 2 is a cross-section view of the preferred embodiment of the present invention taken at A-A of Figure 1.

Figure 3 is a plan view of the preferred embodiment of the present invention.

Figure 4 is an exploded cross section view of an alternative embodiment of the present invention, in which the two compartments are held together by snaps.

REFERENCE NUMBERS

1	Dispenser compartment
2	Disposal compartment
3	Dividing wall
4	Ventilation holes
5	First opening
6	First neck
7	First cap
8	Second opening
9	Second neck
10	Second cap

11 Bottom surface

12 Protrusions

13 Indentations

DETAILED DESCRIPTION OF INVENTION

The present invention is a sunflower seed container that is designed specifically for individuals who eat sunflower seeds while driving, who shell the sunflower seeds in their mouths, and who spit out the sunflower seed shells. The present invention provides those individuals with a convenient way to pour out a few sunflower seeds at a time, shell them, and then spit the shells into the same container from which the sunflower seeds were poured—all without mixing the unshelled sunflower seeds with the sunflower seed shells. The container is designed to fit into any standard vehicle cup holder, and it is volumetrically calibrated so that there is just enough room in the disposal compartment to hold the shells from the sunflower seeds in the dispenser compartment. The container of the present invention could also be used by someone who does not spit out sunflower seed shells but who cracks them open with her hands; in that case, the shells could be placed manually into the disposal compartment.

The present invention also takes into account the fact that the sunflower refuse might not be pleasing from either a visual or olfactory standpoint. Accordingly, the preferred embodiment includes ventilation holes on the top of the disposal compartment to prevent unpleasant odors from emanating from the disposal compartment when the cap is opened. In addition, the two compartments are separately blow molded so that the disposal compartment could be made of an opaque material so as to conceal the sunflower seed refuse. Alternatively, the disposal compartment could be made of

transparent material, and its contents could be hidden from view by packaging placed on the outside of the disposal compartment. Preferably, the dispenser compartment is made of a transparent material so that the user can see how many sunflower seeds are left.

Without a container like the present invention, individuals who eat sunflower seeds while driving encounter a number of problems related to disposing of the sunflower shells. For most of us, spitting sunflower seed shells on the floor of the vehicle is not acceptable, and searching for a proper place to dispose of sunflower seed shells can be a distraction to the driver. The vehicle's ashtray is not conveniently located for this purpose and could be difficult to clean out. Opening a window to spit out the shells can result in unwanted exposure to the elements and even shells blowing back into the vehicle. Drivers who use an insulated travel mug for coffee may be reluctant to place sunflower seed refuse in the mug because it may cause the coffee to taste salty after the sunflower seeds are dumped out. The convenience and utility of the present invention will solve these problems and increase driver safety for those who spit and drive.

Figure 1 is a perspective view of the preferred embodiment of the present invention. The dispenser compartment 1 holds unshelled sunflower seeds, and the disposal compartment 2 holds the sunflower seed refuse (which includes sunflower seed shells and may or may not include saliva). A dividing wall 3 divides the dispenser compartment 1 from the disposal compartment 2. In order to maximize the amount of unshelled seeds that can be held in the dispenser compartment and the amount of refuse that can be held in the disposal compartment, the dividing wall is oriented so that the volumetric ratio of the dispenser compartment to the disposal compartment is in the range

of 1:1.5 to 1:1.9. The top of the disposal compartment includes a plurality of ventilation holes 4.

The dispenser compartment 1 includes a first opening 5 and a first neck 6. The first opening 5 is covered by a first cap 7, which is preferably a flip-top cap rather than a twist-off cap for ease of use in the driving context. Similarly, the disposal compartment 2 includes a second opening 8 and a second neck 9. The second opening 8 is covered by a second cap 10, which is also preferably a flip-top cap rather than a twist-off cap. Preferably, the second opening 8 and the second cap 10 are greater in diameter than the first opening 5 and the first cap 7 to facilitate spitting into the disposal compartment. In one embodiment, the first opening is approximately .87 inches in diameter, and the second opening is approximately 1.5 inches in diameter. In the preferred embodiment, the second neck and second cap are located directly on top of the container to facilitate spitting into the disposal container.

The two compartments, when fitted together, form a bottom surface 11. In the preferred embodiment, the bottom surface 11 is no greater than 3.5 inches in diameter, so that the container will fit into a standard vehicle cup holder. The bottom surface could be flat or corrugated. As used herein, the term "corrugated" means uneven or having alternating ridges and grooves. In the preferred embodiment, the overall height of the container from the bottom surface 11 to the second opening 8 is about 9.5 inches.

Figure 2 is a cross-section view of the preferred embodiment of the present invention taken at A-A of Figure 1. This figure illustrates the placement of the dividing wall 3 in relation to the dispenser compartment 1 and the disposal compartment 2. Present technology dictates that the two compartments would each be separately blow

molded, and the dividing wall 3 would actually consist of one surface from each of the compartments. The two compartments could be held together by packaging or, as illustrated in Figure 4, by snaps or other means of holding the two compartments together.

Figure 3 is a plan view of the preferred embodiment of the present invention. It shows the location of the dividing wall 3 in relation to the first neck 6 and the second opening 8, and it also illustrates that the second opening 8 is preferably wider than the first opening 5.

Figure 4 is an exploded cross section view of an alternative embodiment of the present invention, in which the two compartments are held together by a plurality of snaps. In this figure, the snaps consist of protrusions on the disposal compartment side of the dividing wall and indentations on the dispenser compartment side of the dividing wall. The protrusions could be located on the dispenser side of the dividing wall, and the indentations could be located on the disposal side of the dividing wall. Additionally, the two compartments could be attached by packaging or other types of surface mating mechanisms. Because the container of the present invention is intended to be disposable, in most instances the sunflower seeds would be consumed before the packaging would wear out.

Although the foregoing discussion has focused on sunflower seeds, the container of the present invention could be used for any consumable food item that can fit through the first opening 5 and that generates refuse upon consumption. Another example of such a food item is pistachio nuts.

The preferred embodiment of the present invention has been shown and described above; however, it will be apparent to those skilled in the art that many changes and modifications may be made without departing from the invention in its broader aspects. The appended claims are therefore intended to cover all such changes and modifications as fall within the true spirit and scope of the invention.